Enhanced LEED Reporting Measure

Description

The primary measure would create output tables to help in completing the information as required for LEED submittals. This is primarily related to completing the

v4_Minimum Energy Performance Calculator_v04.xlsm

the file is available at:

http://www.usgbc.org/resources/minimum-energy-performance-calculator

If time allows, a second measure would be developed that applies specific end-use subcategories to OpenStudio object models.

https://docs.google.com/document/d/1JqJkXvONfMRsHf24ebDDT9biTlQe2CbHLux8Vpp-tjw/edit?usp=sharing

Modeler Description

At this point, no specific input is expected for the LEED reporting measure. The outputs shown on these two EnergyPlus NFPs show the output tables that are needed based on the LEED spreadsheet:

https://github.com/NREL/EnergyPlus/blob/develop/design/FY2017/NFP-ProvideAdditionalLEEDrelatedFeatures.md

https://github.com/NREL/EnergyPlus/blob/develop/design/FY2017/NFP-UpdateLEEDSummaryReport.md

The LEED reporting measure will be the focus of the work but integrating it with Parametric Analysis Tool (PAT) is also important so an example file that uses the new reporting measure along with the Rotate Building measure and the Create Baseline Building measure will be created. This should be a good example workflow for people using OpenStudio for LEED projects.

To facilitate import into the LEED spreadsheet, the Enhanced LEED Reporting Measure will produce output in CSV format so that the results can be opened in a spreadsheet program easily. It will also produce outputs in the normal HTML format for viewing in the OpenStudio application. The user will have an option to create a single CSV file or a CSV file for each spreadsheet tab in the v4_Minimum Energy Performance Calculator_v04.xlsm file.

Measure Type

The LEED reporting measure would be an OpenStudio Reporting Measure

Taxonomy

The LEED reporting measure would appear in Reporting.QAQC

Intended Software Tools

Apply Measures Now, OpenStudio Application, PAT, Analysis Spreadsheet

Use Case Types

Automatic report generation

Arguments

The LEED reporting measure is not expected to have any arguments.

Initial Condition

All expected tabular results were found.

Final Condition

The following log messages would be generated:

An output report and 11 CSV files were created for LEED Minimum Energy Performance Calculator spreadsheet.

Warning

The following log messages may be generated as a warning:

Warning: Data could not be found and the LEED MEPC has missing values for section X table Y
Warning: Data could not be written to the CSV file for LEED MEPC reporting

Error

The following log messages may be generated as an error:

Error: No data could be found and the LEED MEPC is missing all values.

Information

The following log messages would be generated:

An output report section and CSV file were created for LEED MEPC General Information

An output report section and CSV file were created for LEED MEPC Schedules
An output report section and CSV file were created for LEED MEPC EFLH Calculator
An output report section and CSV file were created for LEED MEPC Opaque Assemblies
An output report section and CSV file were created for LEED MEPC Shading and Fenestration
An output report section and CSV file were created for LEED MEPC Lighting
An output report section and CSV file were created for LEED MEPC Process Loads
An output report section and CSV file were created for LEED MEPC Service Water Heating
An output report section and CSV file were created for LEED MEPC Air-Side HVAC
An output report section and CSV file were created for LEED MEPC Water-Side HVAC
An output report section and CSV file were created for LEED MEPC Performance Outputs 1